

OCCA Countywide Groundwater Baseline Testing Program

"What's In Our Water?"

Summary:

Since early 1997, Otsego County Conservation Association (OCCA) has been working diligently to promote public education and involvement specific to the potential industrialization of Otsego County by the oil and gas industry. Spurred by the efforts of OCCA and others, grassroots organizations and municipal leaders have made significant strides toward the preservation of public health, safety, and the environment. Additionally, numerous business owners and corporate entities have stepped forward in expressing opposition to such a proposed industrialization of the area.

From the Environmental Protection Agency (EPA), to the NYS Department of Environmental Conservation (NYSDEC) and, more locally from the Otsego County Soil & Water Conservation District (SWCD), have come versions of the following statement, "...private landowners should complete groundwater testing on their property to establish a baseline of key data for reference against any observed industrial impacts that may arise..." Perhaps the most resonate of expressed concerns from those advocating against this potential industrialization of Otsego County is the importance of protecting drinking water supplies. And the biggest deterrent to groundwater testing is cost.

To that end, OCCA is asking for your assistance in raising the necessary funding base that will be used to help mitigate the costs of initial groundwater testing and/or monitoring of targeted properties countywide. If conducted prior to the advent of heavy industry, including the gas drilling industry and any drilling activity, a legal baseline would be established that may stand up under litigation to prove well water contamination heretofore unsubstantiated.

Approximately one test for every 12 square miles of the county can be completed. Such a fund permits at least 83 groundwater tests to be conducted with this initiative alone. OCCA has already secured more than \$50,000 from private donors and past and present members of the OCCA Board of Directors to put toward this effort. By donating now, you will be instrumental in this effort to help preserve Otsego County's potable water from the potential devastation of impacts from ANY heavy industry.

Background:

While there are anecdotal references and firsthand accounts of contaminated well water, the oil and gas industry has time and time again stated there have been "no proven cases of well water contamination associated with natural gas wells." Such claims have included, but are not limited to, drilling activities that involved high-volume hydraulic fracturing. The fact remains that in countless cases there was insufficient data prior to an observed event and, as a result, the complaints of alleged industrial contamination due to industrial acts were dismissed on the grounds that "perhaps the water was always contaminated."

It remains clear then that, in order to help citizens preserve and protect their water and to resolve any disputes arising from changes in their water quality, every property owner *should* have their water tested and monitored. Such testing is necessary in order to establish a baseline reference against which future observation may be compared.

This is more easily said than done. With the recommended water testing coming at a price tag of approximately \$800 per residence many citizens and property owners are unable to consider such valuable testing as a viable option. As such, OCCA is looking to establish a fund of \$80,000 that will be used to strategically complete groundwater testing of private drinking water wells in pre-targeted areas countywide, based on existing data and identified gaps.

Such a fund will be able to provide, at a minimum, one groundwater test for every 12 square miles of Otsego County —approximately 83 tests plus cover the administrative costs associated with the project. OCCA will also work continuously to raise more money for this effort and, with the coordination of the SWCD and the United States Geological Service (USGS) and U.S. Environmental Protection Agency (EPA) testing methodology, to determine a sampling regimen that will serve to represent the county as a whole.

Project Specifics:

1. Water Quality Data
2. Groundwater and Aquifer Fingerprinting
3. Partnership in Dissemination of Data
4. Legal Baseline Testing

OCCA will employ the comprehensive sampling parameters and protocol proffered by the Otsego County Soil & Water Conservation District and its legal and scientific advisors. This approach was designed as “general guidance” developed by comparing lists of parameters previously made available by industry, environmental consulting firms, NYSDEC, Penn State Cooperative Extension (Water Fact Sheet #28) (copies available upon request) and other counties in New York. This comparison was assisted by H2H Associates, a private environmental consulting firm, and concluded with a list of 24 parameters seen as most appropriate and cost effective in detecting potential contamination. To address the issues of frequency and duration, the working group also consulted with a representative of the USGS (copies available upon request).

It is understood that the SWCD is currently looking for funding to assist in making Otsego County a pilot project that will be reviewed and monitored by the USGS, New York State Department of Health (NYSDOH), NYSDEC, and the State University of New York at Oneonta (SUNY-Oneonta). All data that OCCA can collect through its groundwater program will also be incorporated into this larger multi-agency collaborative effort—ensuring that Otsego County is a leader in safeguarding our resources and a model for neighboring counties.

By establishing this matching fund, OCCA intends to support and help institute a program that will work to create a baseline accounting of the county’s groundwater. This program is not intended to provide one test, but rather to establish an innovative and continuous monitoring protocol to cover the entire county. The oil and gas trade could be just the beginning. What’s next? Are we prepared?

OCCA has used Geographic Information System (GIS) software and the Natural Resources Conservation Service (NRCS) Soil Survey Geographic (SSURGO) Database data to determine and map the average depth to the water table and to bedrock for all portions of Otsego County. Much of the water table is within at least 6 feet of the surface and therefore susceptible to both surface and groundwater contamination. Based on this information and the possible proliferation of natural gas drilling sites within the county, it is clear that there exists a significant potential for groundwater—and therefore

drinking water—contamination countywide. Further, without representative sampling, testing, and monitoring of this vital resource, there will be no recourse against the causes of such contamination.

Through this project as proposed, in collaboration with the Draft USGS study parameters, OCCA will specifically address or deliver the following:

1. **Water Quality Data – Existing and new water quality data for Otsego County will be compiled from a range of sources** including: 1) USGS National Water Information System; 2) NYSDEC Water Well Program; 2) state and county health departments; 3) gas-development companies; and 4) local universities. Analytical laboratory and quality assurance/quality control methods associated with all these data will be documented.
2. **Groundwater and Aquifer Fingerprinting** – It is suggested by an existing consortium of environmental professionals including but not limited to US EPA, NYSDEC, NYSDOH, SWCD, SUNY-Oneonta and its Catskill Headwaters Research Institute, OCCA, Binghamton University, Town of Oneonta, Community Science Institute and others, that water sources be “fingerprinted.” SWCD and SUNY-Oneonta, in part with OCCA support, have begun testing various public and private water supplies within Otsego County. They have determined that there are currently 66 elements that can be analyzed and, of those 66, 50 elements are detectable. Initial analyses show that the range in concentrations between wells is greater than seasonal changes for a single well, and this implies that both water wells and aquifers can be fingerprinted. This process is the thrust of the current funding request.
3. **Partnership in Dissemination of Data** – First steps in the newly formed Catskill Headwaters Research Institute at SUNY-Oneonta, which will serve as an umbrella for the many stakeholders engaged with watershed and aquifer activities in our region of New York State. The main goals of the Center are: 1) to coordinate watershed and aquifer monitoring; 2) to collect, store and disseminate watershed information; 2) to train students in watershed research, assessment, and management, and; 4) to facilitate ongoing discussions, research, and funding opportunities among federal, state, county, and municipal watershed managers, community-based non-government organizations, academics, community members, and other parties interested in water resources issues within the headwaters of the Susquehanna and Delaware rivers.
4. **Legal Baseline Testing** – Groundwater testing conducted prior to the advent of heavy industry, including the gas drilling industry and any drilling activity, to establish a legal baseline that may stand up under litigation to prove well water contamination as a result of gas drilling heretofore unsubstantiated.

Benefits:

There are many communities, individual homeowners and others that are concerned about the quantity and quality of water that could be affected by shale gas development and other industrial-type uses that may be introduced into the Otsego County area in the years to come.

- Because there is limited knowledge of the variable nature of water quality within any particular area/region—much less within a particular county or state—state and local water-resource managers, the public, and potential industrial entities would benefit from the collection, compilation, and distribution of water quality data from verified data sources.

- Knowledge and understanding of local and regional groundwater and aquifer systems and the associated water quality will benefit all parties, and serve as an impartial scientific basis from which to judge the impact, or lack of impact, of shale gas and other industrial developments on these vital water resources.

Conclusion:

It is clear that OCCA's proposed project and anticipated collaborative effort with federal, state and local entities represents a good first step toward a much larger goal. Your contribution will help set the stage for an unprecedented environmental statement in Otsego County and illustrate the power of grassroots support. Please assist OCCA in creating this fund and help the citizens of the county join us in defending our water for us and, most importantly, for generations to come.